

**IN THE CLAIMS:**

A1

1. (Currently amended) An encryption key management system comprising:  
a master key; and  
a portable processor, wherein the portable processor uses the master key for  
generating an encryption key; and  
a variable key range variable, wherein the portable processor further uses the  
variable key range variable for generating the encryption key, wherein the variable key  
range variable comprises at least one of a card number, a card group number and a  
reference number representing a number of keys.

2. (Canceled)

A2

3. (Currently amended) The encryption key management system recited in claim 21,  
wherein the variable key range variable is output with the encryption key.

4. (Canceled)

5. (Currently amended) The encryption key management system recited in claim 21,  
wherein the portable processor further comprises:  
a hashing function for generating the encryption key.

6. (Original) The encryption key management system recited in claim 1, wherein  
the portable processor is a smart card.

7. (Original) The encryption key management system recited in claim 6, wherein  
the smart card is accessed through verification of a personal identification number.

8. (Currently amended) The encryption key management system recited in claim  
41, wherein the portable processor further comprises:

an incrementor for increasing the value of the reference number in response to the encryption key being generated.

9. (Original) The encryption key management system recited in claim 1, wherein the portable processor is a first portable processor and the system further comprises:

a second portable processor, wherein the portable processor uses the master key for generating a decryption key.

10. (Original) The encryption key management system recited in claim 9, wherein the second portable processor further uses the variable key range variable for generating the encryption key.

11. (Original) The encryption key management system recited in claim 10, wherein the variable key range variable is input to the second portable processor.

12. (Original) The encryption key management system recited in claim 10, wherein the second portable processor further comprises:

a hashing function for generating the decryption key using the master key.

13. (Original) The encryption key management system recited in claim 9, wherein the second portable processor is a smart card.

14. (Original) The encryption key management system recited in claim 13, wherein the smart card is accessed through verification of a personal identification number.

15. (Original) The encryption key management system recited in claim 10, wherein the second portable processor further comprises:

a hashing function for generating the decryption key.

16. (Currently amended) An encryption key management system comprising:  
a master key; and

AB  
a portable processor, wherein the portable processor uses the master key for generating a decryption key; and

a variable key range variable, wherein the portable processor further uses the variable key range variable for generating the decryption key, wherein the variable key range variable comprises at least one of a card number, a card group number, and a reference number representing a number of keys.

17. (Canceled)

AB  
18. (Currently amended) The encryption key management system recited in claim ~~17~~16, wherein the variable key range variable is output with the decryption key.

19. (Canceled)

AA  
20. (Currently amended) The encryption key management system recited in claim ~~17~~16, wherein the portable processor further comprises:  
a hashing function for generating the decryption key.

21. (Original) The encryption key management system recited in claim 16, wherein the portable processor is a smart card.

22. (Currently amended) An encryption key management method comprising:  
receiving a master key;  
generating an encryption key using the master key, wherein the encryption key is generated by a portable processor; and  
outputting the encryption key; and  
creating a variable key range variable, wherein the portable processor uses the variable key range variable for generating the encryption key, wherein the variable key range variable comprises at least one of a card number, a card group number, and a reference number representing a number of keys.

23. (Canceled)

A5  
24. (Currently amended) The method recited in claim ~~23~~22 further comprises:  
outputting the variable key range variable.

25. ✓ (Canceled)

A6  
26. (Currently amended) The method recited in claim ~~23~~22, wherein generating the encryption key further comprises:  
hashing the master key.

27. (Currently amended) The method recited in claim ~~23~~22, wherein the portable processor is a smart card.

28. (Original) The method recited in claim 27 further comprises:  
verifying a personal identification number; and  
accessing functionality of the smart card.

29. (Original) The method recited in claim 22, wherein the portable processor is a first portable processor and the method further comprises:  
generating a decryption key using the master key, wherein the decryption key is generated by a second portable processor; and  
outputting the decryption key.

30. (Original) The method recited in claim 29, prior to generating the encryption key further comprises:  
receiving a variable key range variable, wherein the second portable processor uses the variable key range variable for generating the encryption key.

31. (Currently amended) The method recited in claim ~~23~~22, wherein the second portable processor is a smart card.

32. (Original) The method recited in claim 22, wherein a smart card is accessed through verification of a personal identification number.

33. (Currently amended) An encryption key management method comprising:  
receiving a master key; and  
generating a decryption key using the master key, wherein the decryption key is generated by a portable processor; and  
outputting the decryption key; and  
creating a variable key range variable, wherein the portable processor uses the variable key range variable for generating the decryption key, wherein the variable key range variable comprises at least one of a card number, a card group number, and a reference number representing a number of keys.

34. (Canceled)

35. (Currently amended) The method recited in claim 3433 further comprises:  
outputting the variable key range variable.

36. (Canceled)

37. (Currently amended) The method recited in claim 3433, wherein generating the decryption key further comprises:  
hashing the master key

38. (Currently amended) The method recited in claim 3433, wherein the portable processor is a smart card.